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DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

DCI/IC 5839-82

1 Prod-1 OCT 1982

General Defense
Intelligence Program

29 September 1982

S-170/DG

MEMORANDUM FOR THE DIRECTOR, INTELLIGENCE COMMUNITY STAFF

SUBJECT: FY 84-85 DCI Production Enhancement Initiatives (PEI) (U)

Reference: D/GDIP Memorandum TCS-570039/82, 21 September 1982, subject as above.

Our review of the GDIP Production Enhancement Initiative submissions is now complete. In evaluating these submissions, we used the DCI criteria that initiatives should:

-- address key substantive intelligence problem;
-- directly enhance the quality of exploitation or analysis;
-- be innovative and speculative; and
-- show promise of a high pay-off.

All the GDIP submission had merit and should be considered by the review committee. We feel the eight initiatives enclosed best fit the DCI criteria, and would make excellent choices for DCI consideration.

The NISC NELEGS initiative was not in our 21 September submission. The submission is at enclosure 2.

If any additional support is required, please contact my Assistant for Production, at 694-5043.

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DIA

Director, GDIP Staff

2 Enclosures
1. Production Enhancement Initiatives, (S), 1 Cy
2. Navy NISC NELEGS Initiative (S), 1 Cy

UNCODE

UNCLASSIFIED When Separated from Enclosures

DIA review completed.

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NEW INITIATIVE

Expenditure Center 2303 Navy Scientific & Technical (S&T) Expenditure Unit 321 NISC

Project Code and Title NELEGS FOC 1987

	FY83	FY84	FY85	FY86	FY87	FY88
TOA		100	100			
MP						

DESCRIPTION:

o Aircraft and missile equipment and simulator developers in the RDT&E community require accurate and detailed information on developing foreign gun technologies. In addition, the community needs timely long range forecasts that provide detailed technical information on future naval gun systems. One of these promising new systems is Electromagnetic Guns. Proper assessment of this new technology is required for a more cost effective acquisition of U.S. weapons, simulator systems, and aircraft. These guns are currently in the demonstration stage and velocities 15 km/sec have been attained. It is known that several nations are currently pursuing this technology.

— The basic data will be generated by the Lawrence Livermore Laboratory, a pioneer in Electromagnetic Gun technology. Coordination and analytical support will be provided by NISC-40.

— All source data will be used to establish the level of technology in the world concerning Electromagnetic Guns. This technology will be evaluated in the scenario of Naval Warfare to assess applicability and feasibility of development. Such an assessment can then be used to address in detail likely future threat systems in the naval antiair area.

— Data available, including patents, standards, textbooks, journals, HUMINT, etc. will be used to establish the technology base. The wide variety of sources, and the technical expertise of Livermore, will allow for a detailed assessment of Electromagnetic Guns in the naval environment. Results of this study will provide the data required to design countermeasures, tactics, and follow-on U.S. aircraft/missiles.

— Time Phasing:
- Deterine overall world state of the art in Electromagnetic Gun systems (i.e., power supplies, high energy switching, rail types, projectile types, etc.).
- Establish families of Electromagnetic Gun systems by generic characteristics.
- Establish developmental time lines and project likely operational dates for each generic family.

NEW INITIATIVE

Expenditure Center 2303 Navy Scientific & Technical (S&T) Expenditure Unit 321 NISC

Project Code and Title NFLEGS FOC 1987

	FY83	FY84	FY85	FY86	FY87	FY88
TOA		100	100			
MP						

DESCRIPTION: (Continued)

- Attempt to verify developmental progress in these systems by country.
- Identify unique variations to generic gun families by individual countries.
- Analyze applicability of each generic gun family to the Naval environment.
- Hypothesize most likely Electromagnetic Gun types for deployment by country.

-- Intelligence Community Applicability:
- Data developed have immediate use in the S&T agencies in better, more complete assessments of the threat generated by this new, sophisticated technology.
- Weapon projections provide significant input to the NIE process.
- Impacts on critical technology transfer.
- Will provide a benchmark against which U.S. as well as other nations can be measured.

— Anticipated Impacts:
- Availability of data on Electromagnetic Guns prior to deployment.
- Prevention of technological surprise.
- Early recognition of new systems and assessment of such systems early in development.
- Early, cost effective acquisition of counter systems.
- Detailed understanding of threat capability and vulnerability in deployment.
- Enhanced readiness at lower cost.
- Probability of Success: Very High.

— Anticipated Intelligence Consumer Benefits:
- RDT&E community.
- Planning and acquisition organizations.
- Warfare Planners.
- Operations forces.

— This production enhancement meets DCI Goals No's. 2, 6, 3 and supports DIP required capabilities 102.

SUBJECT: FY 84-85 DCI Production Enhancement Initiatives (PEI) (U)

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